

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

B7



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/001,430

10/31/2001

Roland M. Hochmuth

10017761-1

2418

7590

09/07/2004

HEWLETT-PACKARD COMPANY

Intellectual Property Administration

P. O. Box 272400

Fort Collins, CO 80527-2400

EXAMINER

CHUNG, DANIEL J

ART UNIT

PAPER NUMBER

2672

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/001,430

Applicant(s)

HOCHMUTH ET AL.

Examiner

Daniel J Chung

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-3 and 5-28 are presented for examination. Claim 4 has been cancelled by the amendment filed on 6-25-2004. This office action is in response to the amendment filed on 6-25-2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2,5-6,8-11 and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Rostoker et al. (6,160,544)

Regarding claim 1, Rostoker et al discloses that the claimed feature of a graphics adapter, comprising: a frame buffer [i.e. "Frame memories"; 346] operable to store graphics image data [i.e. video data]; and a network chip [300] coupled to the frame buffer [346], the network chip comprising: a compression unit [i.e. "MPEG encoder" in Fig 10, "MPEG video compression"; 329] operable to compress graphics image data of frame buffer into compressed graphics image data [i.e. "MPEG"]; and a network interface [i.e. "network protocol processing system interconnecting circuit/unit"; 232,333] operable to receive at least a

Art Unit: 2672

portion of compressed graphics image data, network interface further operable to format received compressed graphics image data into a plurality of packets ["packet", "cell"] for transmission over a communication network [330]. (See Abstract, Fig 1, Fig 2, Fig 3, Fig 16, col 4 line 54-col 5 line 40)

Regarding claim 2, Rostoker et al discloses that a network interface port [i.e. "ATM port", "network port"] coupled to network interface, plurality of packets being transmitted from network interface to communication network via network interface port. (See Fig 2, Fig 3, Fig 27)

Regarding claim 5, Rostoker et al discloses that network interface [323,333] further operable to receive compressed graphics image data ["MPEG"] from compression unit [344]. (See Fig 3)

Regarding claim 6, Rostoker et al discloses that a video transmitter ["ATM/ACI transmitter"] operable to transmit graphics image data from frame buffer to a processor-based system [i.e. "CPU"; 338] associated with graphics adapter [300]. (See Fig 1, Fig 3)

Regarding claims 8-9, Rostoker et al discloses that a video output port coupled to video transmitter ["ATM/ACI transmitter"], graphics image data being transmitted from frame buffer via video output port, which video output port [i.e. "video port" in 302] is selected from the group consisting of an analog video port

and a digital video port. (See Fig 1-6, Fig 15)

Regarding claims 10-11, Rostoker et al discloses that plurality of packets being transmitted to at least one destination device, and a first selected plurality of plurality of packets ["packets", "cells"] is for transmission to a first destination device and a second selected plurality of plurality of packets is for transmission to a second destination device. (See Fig 1, col 4 line 54-67)

Regarding claims 26-27, claims 26-27 are similar in scope to the claims 1-2, and thus the rejections to claims 1-2 hereinabove are also applicable to claims 26-27. In addition, Rostoker et al further discloses that a network attachable graphics chip [300] having a graphics unit [307] operable to render a graphics image and a compression unit [344]. (See Fig 1, Fig 3)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3,7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker et al . (6,160,544)

Regarding claims 3 and 7, Rostoker et al fails to disclose that network interface port is selected from the group consisting of an Ethernet port, an Infiniband port, and a wireless network transceiver, and video transmitter is selected from the group consisting of a RAMDAC and a DVI transmitter. However, such features are well-known (commercially available) in an analogous art, in order to permit many more modes which can be placed farther apart, to fully support additional bandwidth, to conveniently interconnect each nodes without physical link cables, to improve compatibility of both analog and digital graphic data, in developing a channel-based, switched-network-topology interconnect standard. Therefore, it would have been obvious to incorporate the above features into the teaching of Rostoker et al for performing a digital video system with optimization.

Regarding claim 28, claim 28 is similar in scope to the claim 3, and thus the rejections to claim 3 hereinabove is also applicable to claim 28.

Claims 12-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker et al in view of Schneider et al. (6,304,895)

Regarding claim 12, Rostoker et al discloses that the claimed feature of a method for transmitting graphics image data over a communication network,

comprising: at least one segment [i.e. 378 in Fig 9] of plurality of segments storing graphics image data [i.e. "video stream data"] corresponding to a particular destination device of a plurality of destination devices [i.e. 309-316]; selecting the at least one segment of plurality of segments corresponding to the particular destination device of plurality of destination devices [i.e. 309-316]; and formatting [i.e. MPEG] at least a portion of graphics image data stored in selected at least one segment into a plurality of packets ["packets", "cells"] for transmission by a network interface [323,333] of graphics adapter [300] to destination device [309-316] over communication network [330]. (See Abstract, Fig 1, Fig 2, Fig 3, Fig 16, col 4 line 54-col 5 line 40)

Rostoker et al does not specifically disclose that "logically dividing a frame buffer of a graphics adapter into a plurality of segments,." However, such limitation is shown in the teaching of Schneider et al. ['memory is physically divide into pages' within video adapter of computer; See col 12 line 43-col 13 line 23] It would have been obvious to one skilled in the art to incorporate the teaching of Schneider et al into the teaching of Rostoker et al, in order to improve the performance of memory with faster identification/retrieval of graphic data, as such improvement is also advantageously desirable in the teaching of Rostoker et al for performing the video distribution system with optimization.

Regarding claim 13, Rostoker et al discloses that transmitting plurality of packets to destination device over communication network. (See Fig 1)

Regarding claims 14-15, refer to the discussion for the claim 12 hereinabove, Schneider et al further discloses that receiving an update request from destination device of plurality of destination devices prior to selecting step and selecting step comprising selecting, in response to receiving update request, segment of plurality of segments corresponding to destination device of plurality of destination devices. (See col 14 line 8-25, col 14 line 58-col 15 line 32)

Regarding claims 16-17, Rostoker et al discloses that adding identification information identifying destination device to each of plurality of packets, where identification information is an Internet Protocol (IP) address of destination device ["TCP/IP", "packet header information", "packet identification"]. (See Fig 7-9)

Regarding claim 18, Rostoker et al discloses that transmitting plurality of packets to another destination device of plurality of destination devices. (See Fig 1)

Regarding claim 19, refer to the discussion for the claim 12 hereinabove,

Rostoker et al does not specifically discloses that "comparing graphics image data of a new image for a particular destination device of a plurality of destination devices with graphics image data of a previous image for particular destination device stored in a frame buffer of a graphics adapter remote from particular destination device; selecting blocks of graphics image data of new image that are different from corresponding blocks of graphics image data of previous image." However, such limitations are shown in the teaching of Schneider et al. (See col 8 lien 25-42) It would have been obvious to one skilled in the art to incorporate the teaching of Schneider et al into the teaching of Rostoker et al, in order to communicate the graphical data with reducing the size of graphic data and minimizing the usage of bandwidth, where image update or modification is required within the network, as such improvement is also advantageously desirable in the teaching of Rostoker et al for transmitting of the updated/requested digital data with faster time at the reduced hardware (i.e. bandwidth).

Regarding claim 20, Rostoker et al discloses that transmitting plurality of packets to particular destination device over communication network. (See Fig 1)

Regarding claim 21, Rostoker et al discloses that compressing selected blocks of graphics image data prior to formatting selected blocks of graphics image data. (See Fig 7-9)

Art Unit: 2672

Regarding claims 22-24, Rostoker et al discloses that adding identification information identifying selected blocks to plurality of packets and identification information comprises block numbers for selected blocks and coordinate information for a plurality of corners of selected blocks. (See Fig 7-9)

Regarding claim 25, Rostoker et al discloses that waiting for a request for graphics image data from at least one of at least one destination device. (See Fig 7-9)

Response to Arguments/Amendments

Applicant's arguments with respect to claims 1-3 and 5-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

Art Unit: 2672

period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Chung whose telephone number is (703) 306-3419. He can normally be reached Monday-Thursday and alternate Fridays from 7:30am- 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael, Razavi, can be reached at (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (Central fax)

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

djc
August 10, 2004

A handwritten signature in black ink, appearing to read "Matthew Luu", with a stylized flourish at the end.

MATTHEW LUU
PRIMARY EXAMINER